Autorizado por la Oficina del Contralor Electoral OCE-SA-2024-0516

Autorizado por la Oficina del Contralor Electoral OCE-SA-2024-00399

2024 13th Scientific Day May 8

UNVEILING BARRIERS TO CANCER CARE ACCESS: EXPLORING CLINICAL AND SOCIODEMOGRAPHIC DISPARITIES

Lorena González-Sepúlveda, MS[1]; Mariela Bournigal-Feliciano, MPH[1]; Sofía Contreras-Fernández, BS[1,2]; Karina Torres-Mojica, BS[1]; Rocío Avilés-Mercado, BS[1]; Juan González-Mayoral, BS[1]; Valeria Acevedo-Matos[3]; Ana Cristina Del Pino, BS[1]; Nancy R. Cardona-Cordero, DrPH, MS[1]; Marievelisse Soto-Salgado, MS, DrPH[1]

[1]University of Puerto Rico Comprehensive Cancer Center, San Juan, PR; [2]University of Puerto Rico Medical Sciences Campus, Graduate School of Public Health, San Juan, PR; [3]University of Puerto Rico Medical Sciences Campus, School of Nursing, San Juan, PR

BACKGROUND

- In 2020, Puerto Rico (PR) reported 14,168 new cancer cases and 5,354 cancer-related deaths.[1]
- Timely access to diagnosis and treatment are crucial for enhancing survival and quality of life among cancer patients.
- However, it has been previously reported that minority cancer patients are more likely to experience delay or forgo care when compared to non-Hispanic Whites.[2]
- Previous studies have identified various social factors contributing to the delay of care among cancer patients, including cost of treatment, transportation issues, distance traveled, organizational barriers, among others.[2-5]
- Identifying the current barriers to accessing cancer care and its association to patients' characteristics is essential for promoting health equity, improving healthcare delivery, and ensuring that everyone could have the opportunity to receive the care they need.

OBJECTIVE

- Our study aimed to identify barriers to accessing cancer treatment and explore their association with patients' selected characteristics.

METHODS

- Ongoing cross-sectional study, collecting data through an online, confidential and anonymous survey in REDCap from November 16, 2023 to April 8, 2024.
- Eligible participants were cancer patients aged 21+ years, who had received active treatment within the past 12 months and resided in PR. (n = 293)
- Variables of interest:

Independent variables:	Dependent variable:
Sociodemographic and Clinical Characteristics	At least one barrier to initiate/continue cancer treatment

- Statistical Analysis – All data analyses were performed using the statistical software STATA v.18.
  - Descriptive statistics were used to assess distribution of the data.
  - Chi-squared test was used to assess the association between participants' selected characteristics and the presence of at least one barrier to accessing cancer care.
  - Multivariate logistic regression (MLRM) was performed to estimate odds ratios and 95% confidence intervals, including variables with p < 0.10 in the univariate logistic regression models and/or predictors supported by scientific literature.
- This project was approved by the Institutional Review Board of the University of Puerto Rico Comprehensive Cancer Center (IRB # 2023-11-123)

Participate in START-PR

AHEAD Interest Group

RESULTS

Figure 1. Distribution of participants with at least one barrier to initiate or continue cancer treatment (n=293)

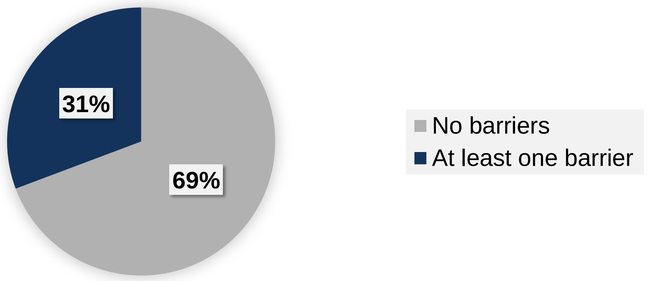
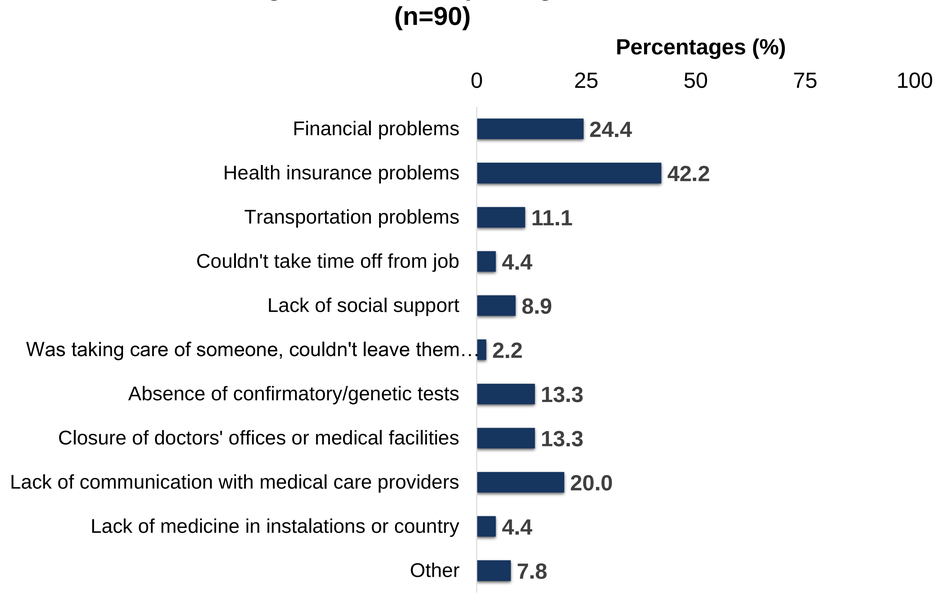


Figure 2. Types of barriers to initiate or continue cancer treatment amongst individual reporting at least one barrier (n=90)



Note: One participant may have more than one barrier (the most barriers reported by one patient were 5 barriers). Other barriers included prolonged time to receive cancer care, doctor quit patient-doctor relationship, team/provider lack of knowledge about condition, error in reading of biopsy and lack of an interpreter.

Table 1. Distribution of sociodemographic and clinical characteristics and their association with experiencing barriers to initiating/continuing cancer treatment among cancer patients in Puerto Rico (n=293).

	Overall n (Col %)	At least one barrier n (Row %)	Crude OR (95% CI)[a]	Adjusted OR (95% CI)[a,b]
Sociodemographics				
Age (years)				
< 65	191 (65.2)	60 (31.4)	1.00	1.00
≥ 65	102 (34.8)	30 (29.4)	0.87 (0.48, 1.56)	1.03 (0.51, 2.08)
Sex				
Male	85 (29.0)	18 (21.2)	1.00	1.00
Female	208 (71.0)	72 (34.6)	**2.19 (1.10, 4.36)**[c]	1.81 (0.86, 3.81)
Education[d]				
> 12th grade	216 (74.2)	68 (31.5)	1.00	1.00
≤ 12th grade	75 (25.8)	21 (28.0)	0.69 (0.34, 1.40)	0.91 (0.40, 2.08)
Income[d]				
≥ $25,000	25 (38.2)	30 (31.6)	1.00	1.00
< $25,000	154 (61.9)	51 (33.1)	1.04 (0.59, 1.83)	1.41 (0.68, 2.95)
Civil status[d]				
Has Partner	170 (58.4)	44 (25.9)	1.00	1.00
No Partner	121 (41.6)	46 (38.0)	**1.80 (1.03, 3.16)**[c]	1.80 (0.99, 3.28)
Residential area[d]				
Urban/Suburban	203 (69.8)	63 (31.0)	1.00	1.00
Rural	88 (32.2)	26 (29.6)	0.90 (0.49, 1.65)	0.83 (0.43, 1.60)
Employment[d]				
Employed	88 (32.2)	31 (35.2)	1.00	1.00
Unemployed	50 (17.2)	13 (26.0)	0.62 (0.25, 1.57)	0.58 (0.20, 1.68)
Other[e]	153 (52.6)	45 (29.4)	0.81 (0.45, 1.47)	0.97 (0.45, 2.12)
Health insurance				
Private	83 (28.7)	32 (38.6)	1.00	1.00
Medicare	120 (41.5)	34 (28.3)	0.55 (0.29, 1.06)	0.50 (0.21, 1.19)
Public	86 (29.8)	23 (26.7)	0.56 (0.27, 1.13)	**0.41 (0.18, 0.97)**[c]
Clinical characteristics				
Time since cancer diagnosis[d]				
Mean ± SD	2.0 ± 2.5	2.3 ± 3.1	-	-
Median (P25, P75)	1 (1, 2)	1 (1, 2)	-	-
Stage of cancer[d]				
Localized	171 (64.8)	47 (27.5)	1.00	1.00
Regional	66 (25.0)	28 (42.4)	**1.88 (1.02, 3.48)**[c]	1.76 (0.92, 3.35)
Distant	27 (10.2)	7 (25.9)	0.57 (0.18, 1.81)	0.62 (0.18, 2.06)
Multimorbidity[f]				
No	80 (27.3)	17 (21.3)	1.00	1.00
Yes	213 (72.7)	73 (34.3)	**2.00 (1.01, 3.99)**[c]	1.99 (0.96, 4.10)

Abbreviations: OR, Odds Ratios; CI, Confidence Intervals

[a] Multivariate logistic regression model was performed to estimate adjusted OR and 95% CIs. Models included a sample size of 231.

[b] Models were adjusted for sex, age, income, health insurance, residential area, stage of cancer, living with a partner, and multimorbidity.

[c] Results were statistically significant (p<0.05).

[d] Total may not equal the overall sample size due to missing values.

[e] Other employment include individuals who were students, retired, and disabled.

[f] Multimorbidity was define as having two or more health conditions.

DISCUSSION

- Approximately 31% of participants experienced at least one barrier to accessing cancer treatment, with the most common barriers including health insurance problems (42.2%), financial issues (24.4%), and lack of communication with healthcare providers (20.0%). These results were consistent with findings from other researchers.[4-6]
- After controlling for other factors, individuals with public insurance had 59% lower odds (95%CI: 0.18, 0.97) of experiencing at least one barrier compared to those with private insurance.
- Cancer stage and multimorbidity did not show a statistically significant difference in presenting barriers to receiving cancer care in the MLRM. However, other studies have consistently shown an association between these factors and the delay or avoidance of cancer treatment.[3,7] Differences in our results to the other studies may be due to variables included in the regression models or due to the sample size.
- Of participants facing barriers for accessing cancer care, 13.3% reported doctor's office or medical facility closures. This aligns with the increasing exit of medical providers from Puerto Rico since 2009, potentially impacting cancer diagnosis and patient care negatively.[8]
- The potential for generalizing our findings may be limited due to the utilization of a convenience sample and reliance on self-reported data.
- Nevertheless, to our knowledge, this is the first time that cancer care barriers faced by cancer patients in active treatment were assessed in PR. Previously, researchers explored these barriers from the perspective of healthcare providers using a qualitative study design[4], while others explored disruption in oncology care in the aftermath of hurricane Maria.[9]

CONCLUSIONS

- In PR, cancer patients facing challenges to access cancer care are mainly affected by health insurance problems, financial issues, and lack of communication.
- Further studies should evaluate cancer patients' experiences when seeking treatment and to develop targeted interventions to improve access to cancer care.

REFERENCES

Scan this QR code to access the references on this poster.

Autorizado por la Oficina del Contralor Electoral OCE-SA-2024-06118